

**AMENDMENT TO CLAIMS**

1. (Original) A chemical composition comprising:  
a substantially pure population of magneccules composed of clusters of one of a molecule, a dimer, an atom and combinations thereof in combination with one of another molecule, dimer or atom, and any combination thereof said magneccules being detectable via peaks in mass spectrometry;

said peaks in the mass spectrometry being unidentifiable as any known conventional molecule and said magneccules having no infrared signature for a gas or ultraviolet signature for a liquid or other signature for a solid other than a corresponding signature of conventional molecules or dimers constituting said magneccules; and

said magneccules being formed by mutual attractions among opposite polarities of a magnetic polarization of orbits of at least some peripheral electrons of atomic constituents of said magneccules in conjunction with a polarization of intrinsic magnetic moments of nuclei and a polarization of intrinsic magnetic moments of electrons, when a pair of said polarization of intrinsic magnetic moments of electrons is not correlated into antiparallel valence bonds.

2. (Original) The chemical compositions of Claim 1, wherein said magnetic polarizations of said orbits of peripheral electrons and said intrinsic magnetic moments are formed by subjecting a substance to any one of an external magnetic field, external electromagnetic field, microwave, pressure, friction, and any combination thereof.

3. (Original) The chemical compositions of Claim 1, wherein said infrared signatures for gases or ultraviolet signatures for liquids or other signatures for solids due to conventional molecules and dimers constituting the magneccules are altered because of the presence of peaks not existing in conventional signatures.

4. (Original) The chemical compositions of Claim 3, wherein said peaks not existing in conventional signatures originate from attractive forces between opposite inter-atomic polarities of a magnetic polarization of the orbits of at least some of the peripheral non-valence electrons of the atoms constituting said conventional molecule or dimer in conjunction with the polarization of the intrinsic magnetic moments of nuclei and of electrons, when not correlated into valence bonds with antiparallel spins.

5. (Original) The chemical compositions of Claim 1, wherein the average density is greater than that of the conventional molecules constituting said magnecoles and any of their combination under the same conditions of volume, pressure and temperature.

6. (Original) The chemical compositions of Claim 1, wherein an excess energy content is released from a thermochemical reaction of said essentially pure population of magnecoles as compared to the energy released by thermochemical reaction of any conventional molecular constituent and any combinations thereof.

7. (Original) The chemical compositions of Claim 6, wherein the excess energy content is due to a storage of energy in the structure of said magnecoles, said conventional molecules and said dimers constituting the magnecoles.

8. (Original) The chemical compositions of Claim 1, wherein said peaks in the mass spectrometry change in time while keeping constant the average magnecolar density.

9. (Original) The chemical compositions of Claim 1, wherein said essentially pure population of magnecoles has an excess adhesion to other substances when compared to the adhesion of any molecule constituting said magnecoles and any combinations thereof.

10. (Original) The chemical compositions of Claim 9, wherein said excess adhesion originates from a magnetic polarization via induction of the orbit and intrinsic magnetic

moments of atoms constituting said other substances to provide a bond between said magnecules and said other substances among opposite of said magnetic polarizations.

11. (Original) The chemical compositions of Claim 1, wherein said essentially pure population of magnecules has an excess penetration within other substances as compared to that of any conventional molecule constituting said magnecules or that of any of combinations thereof.

12. (Canceled)

13. (Original) The chemical compositions of Claim 2, wherein said essentially pure population of magnecules is formed from a substance having a single molecule.

14. (Original) The chemical compositions of Claim 2, wherein said essentially pure population of magnecules is formed from a substance having at least two different molecules.

15. (Original) The chemical compositions of Claim 1, wherein said essentially pure population of magnecules is a gas.

16. (Original) The chemical compositions of Claim 1, wherein said essentially pure population of magnecules is a liquid.

17. (Original) The chemical compositions of Claim 1, wherein said essentially pure population of magnecules is a solid.

18. (Original) The chemical compositions of Claim 1, wherein said essentially pure population of magnecules is a combustible fuel.

19. (Original) The chemical compositions of Claim 18, wherein said combustible fuel is essentially constituted by hydrogen and its magnecular clusters.

20. (Original) The chemical compositions of Claim 18, wherein said combustible fuel is essentially constituted by oxygen and its magnecular clusters.
21. (Original) The chemical compositions of Claim 18, wherein said combustible fuel is essentially constituted by oxygen and hydrogen bonded into magnecules.
22. (Original) The chemical compositions of Claim 18, wherein carbon and its molecular composites have been essentially removed via chemical processes.
23. (Original) The chemical compositions of Claim 18, wherein carbon and its molecular composites are removed from the combustion exhaust of said combustible fuel with magnecular structure.
24. (Original) The chemical compositions of Claim 18, wherein said combustible fuel with magnecular structure is gasoline.
25. (Original) The chemical compositions of Claim 18, wherein said combustible fuel with magnecular structure is diesel fuel.
26. (Canceled)
27. (Original) The chemical compositions of Claim 16, wherein said essentially pure population of magnecules is formed from molecules from at least two different liquids which are not soluble in each other.
28. (Original) The chemical compositions of Claim 27, wherein the two liquids which are not soluble in each other are water and oil.
29. (Original) A chemical composition comprising:  
a substantially pure population of gas magnecules composed of clusters of one of a molecule, a dimer, an atom and combinations thereof in combination with one of another

molecule, dimer or atom, and any combination thereof said magneccules being detectable via peaks in mass spectrometry;

said peaks in the mass spectrometry being unidentifiable as any known conventional molecule and said magneccules having no infrared signature for a gas or ultraviolet signature for a liquid or other signature for a solid other than a corresponding signature of conventional molecules or dimers constituting said magneccules;

said magneccules being formed by mutual attractions among opposite polarities of a magnetic polarization of orbits of at least some peripheral electrons of atomic constituents of said magneccules in conjunction with a polarization of intrinsic magnetic moments of nuclei and a polarization of intrinsic magnetic moments of electrons, when a pair of said polarization of intrinsic magnetic moments of electrons is not correlated into antiparallel valence bonds; and

said essentially pure population of magneccules being constituted by a gas formed by forcing a liquid through an electric arc.

30. (Original) The chemical compositions of Claim 29, wherein the direction of the liquid flow is perpendicular to the electrodes.

31. (Original) The chemical compositions of Claim 29, wherein the direction of the liquid flow is parallel to the electrodes.

32. (Original) The chemical compositions of Claim 29, wherein said magnetic polarizations of said orbits of peripheral electrons and said intrinsic magnetic moments are formed by subjecting a substance to any one of an external magnetic field, external electromagnetic field, microwave, pressure, friction, and any combination thereof.

33. (Original) The chemical compositions of Claim 29, wherein said infrared signatures for gases or ultraviolet signatures for liquids or other signatures for solids due to

conventional molecules and dimers constituting the magnecules are altered because of the presence of peaks not existing in conventional signatures.

34. (Original) The chemical compositions of Claim 33, wherein said peaks not existing in conventional signatures originate from attractive forces between opposite inter-atomic polarities of a magnetic polarization of the orbits of at least some of the peripheral non-valence electrons of the atoms constituting said conventional molecule or dimer in conjunction with the polarization of the intrinsic magnetic moments of nuclei and of electrons, when not correlated into valence bonds with antiparallel spins.

35. (Original) The chemical compositions of Claim 29, wherein the average density is greater than that of the conventional molecules constituting said magnecules and any of their combination under the same conditions of volume, pressure and temperature.

36. (Original) The chemical compositions of Claim 29, wherein an excess energy content is released from a thermochemical reaction of said essentially pure population of magnecules as compared to the energy released by thermochemical reaction of any conventional molecular constituent and any combinations thereof.

37. (Original) The chemical compositions of Claim 36, wherein the excess energy content is due to a storage of energy in the structure of said magnecules, said conventional molecules and said dimers constituting the magnecules.

38. (Original) The chemical compositions of Claim 29, wherein said peaks in the mass spectrometry change in time while keeping constant the average magnecular density.

39. (Original) The chemical compositions of Claim 29, wherein said essentially pure population of magnecules has an excess adhesion to other substances when compared to the adhesion of any molecule constituting said magnecules and any combinations thereof.

40. (Original) The chemical compositions of Claim 39, wherein said excess adhesion originates from a magnetic polarization via induction of the orbit and intrinsic magnetic moments of atoms constituting said other substances to provide a bond between said magnecules and said other substances among opposite of said magnetic polarizations.

41. (Original) The chemical compositions of Claim 29, wherein said essentially pure population of magnecules has an excess penetration within other substances as compared to that of any conventional molecule constituting said magnecules or that of any of combinations thereof.

42. (Original) The chemical compositions of Claim 41, wherein said excess penetration originates from a reduction of an average size of conventional molecules constituting said magnecules due to magnetic polarization of the orbits of at least one of the peripheral electrons of the atoms constituting said magnecule.

43. (Original) The chemical compositions of Claim 32, wherein said essentially pure population of magnecules is formed from a substance having a single molecule.

44. (Original) The chemical compositions of Claim 32, wherein said essentially pure population of magnecules is formed from a substance having at least two different molecules.

45. (Original) The chemical compositions of Claim 29, wherein said essentially pure population of magnecules is a combustible fuel.

46. (Original) The chemical compositions of Claim 45, wherein said combustible fuel is essentially constituted by hydrogen and its magnecular clusters.

47. (Original) The chemical compositions of Claim 45, wherein said combustible fuel is essentially constituted by oxygen and its magnecular clusters.



48. (Original) The chemical compositions of Claim 45, wherein said combustible fuel is essentially constituted by oxygen and hydrogen bonded into magnecules.

49. (Original) The chemical compositions of Claim 45, wherein carbon and its molecular composites have been essentially removed via chemical processes.

50. (Original) The chemical compositions of Claim 45, wherein carbon and its molecular composites are removed from the combustion exhaust of said combustible fuel with magnecular structure.

51. (Canceled)

52. (Original) A chemical composition comprising:

a substantially pure population of liquid magnecules composed of clusters of one of a molecule, a dimer, an atom and combinations thereof in combination with one of another molecule, dimer or atom, and any combination thereof said magnecules being detectable via peaks in mass spectrometry;

said peaks in the mass spectrometry being unidentifiable as any known conventional molecule and said magnecules having no infrared signature for a gas or ultraviolet signature for a liquid or other signature for a solid other than a corresponding signature of conventional molecules or dimers constituting said magnecules;

said magnecules being formed by mutual attractions among opposite polarities of a magnetic polarization of orbits of at least some peripheral electrons of atomic constituents of said magnecules in conjunction with a polarization of intrinsic magnetic moments of nuclei and a polarization of intrinsic magnetic moments of electrons, when a pair of said polarization of intrinsic magnetic moments of electrons is not correlated into antiparallel valence bonds; and

said essentially pure population of magneccules being formed by forcing a liquid through an electric arc between at least one pair of electrodes.

53. (Original) The chemical compositions of Claim 52, wherein the direction of the liquid flow is perpendicular to the electrodes.

54. (Original) The chemical compositions of Claim 52, wherein the direction of the liquid flow is parallel to the electrodes.

55. (Original) The chemical compositions of Claim 52, wherein said magnetic polarizations of said orbits of peripheral electrons and said intrinsic magnetic moments are formed by subjecting a substance to any one of an external magnetic field, external electromagnetic field, microwave, pressure, friction, and any combination thereof.

56. (Original) The chemical compositions of Claim 52, wherein said infrared signatures for gases or ultraviolet signatures for liquids or other signatures for solids due to conventional molecules and dimers constituting the magneccules are altered because of the presence of peaks not existing in conventional signatures.

57. (Original) The chemical compositions of Claim 56, wherein said peaks not existing in conventional signatures originate from attractive forces between opposite inter-atomic polarities of a magnetic polarization of the orbits of at least some of the peripheral non-valence electrons of the atoms constituting said conventional molecule or dimer in conjunction with the polarization of the intrinsic magnetic moments of nuclei and of electrons, when not correlated into valence bonds with antiparallel spins.

58. (Original) The chemical compositions of Claim 52, wherein the average density is greater than that of the conventional molecules constituting said magneccules and any of their combination under the same conditions of volume, pressure and temperature.

59. (Original) The chemical compositions of Claim 52, wherein an excess energy content is released from a thermochemical reaction of said essentially pure population of magneules as compared to the energy released by thermochemical reaction of any conventional molecular constituent and any combinations thereof.

60. (Original) The chemical compositions of Claim 59, wherein the excess energy content is due to a storage of energy in the structure of said magneules, said conventional molecules and said dimers constituting the magneules.

61. (Original) The chemical compositions of Claim 52, wherein said peaks in the mass spectrometry change in time while keeping constant the average magneular density.

62. (Original) The chemical compositions of Claim 52, wherein said essentially pure population of magneules has an excess adhesion to other substances when compared to the adhesion of any molecule constituting said magneules and any combinations thereof.

63. (Canceled)

64. (Original) The chemical compositions of Claim 52, wherein said essentially pure population of magneules has an excess penetration within other substances as compared to that of any conventional molecule constituting said magneules or that of any of combinations thereof.

65. (Canceled)

66. (Original) The chemical compositions of Claim 55, wherein said essentially pure population of magneules is formed from a substance having a single molecule.

67. (Original) The chemical compositions of Claim 55, wherein said essentially pure population of magneules is formed from a substance having at least two different molecules.

68. (Original) The chemical compositions of Claim 52, wherein said essentially pure population of magneules is a combustible fuel.

69. (Original) The chemical compositions of Claim 68, wherein said combustible fuel is essentially constituted by liquid hydrogen and its magneular clusters.

70. (Original) The chemical compositions of Claim 68, wherein said combustible fuel is essentially constituted by liquid oxygen and its magneular clusters.

71. (Original) The chemical compositions of Claim 68, wherein said combustible fuel is essentially constituted by liquid oxygen and liquid hydrogen bonded into magneules.

72. (Original) The chemical compositions of Claim 68, wherein carbon and its molecular composites have been essentially removed via chemical processes.

73. (Original) The chemical compositions of Claim 68, wherein carbon and its molecular composites are removed from the combustion exhaust of said combustible fuel with magneular structure.

74. (Original) The chemical compositions of Claim 68, wherein said combustible fuel with magneular structure is gasoline.

75. (Original) The chemical compositions of Claim 68, wherein said combustible fuel with magneular structure is diesel fuel.

76. (Original) The chemical compositions of Claim 68, wherein said fuel with magneular structure is formed from a combination of one or more of conventional fuels.

77. (Original) The chemical compositions of Claim 52, wherein said essentially pure population of magneules is formed from molecules from at least two different liquids which are not soluble in each other.

78. (Original) The chemical compositions of Claim 77, wherein the two liquids which are not soluble in each other are water and oil.

79. (Original) A chemical composition comprising:  
a substantially pure population of gas magneccules composed of clusters of one of a molecule, a dimer, an atom and combinations thereof in combination with one of another molecule, dimer or atom, and any combination thereof said magneccules being detectable via peaks in mass spectrometry;

said peaks in the mass spectrometry being unidentifiable as any known conventional molecule and said magneccules having no infrared signature for a gas other than a corresponding signature of conventional molecules or dimers constituting said magneccules;

said magneccules being formed by mutual attractions among opposite polarities of a magnetic polarization of orbits of at least some peripheral electrons of atomic constituents of said magneccules in conjunction with a polarization of intrinsic magnetic moments of nuclei and a polarization of intrinsic magnetic moments of electrons, when a pair of said polarization of intrinsic magnetic moments of electrons is not correlated into antiparallel valence bonds; and

said essentially pure population of magneccules being formed by forcing a gas through an electric arc between at least one pair of electrodes.

80. (Original) The chemical compositions of Claim 79, wherein the direction of the gas flow is perpendicular to the electrodes.

81. (Original) The chemical compositions of Claim 79, wherein the direction of the gas flow is parallel to the electrodes.

82. (Original) The chemical compositions of Claim 79, wherein said magnetic polarizations of said orbits of peripheral electrons and said intrinsic magnetic moments are

formed by subjecting a substance to any one of an external magnetic field, external electromagnetic field, microwave, pressure, friction, and any combination thereof.

83. (Original) The chemical compositions of Claim 79, wherein said infrared signatures for gases or ultraviolet signatures for liquids or other signatures for solids due to conventional molecules and dimers constituting the magnecules are altered because of the presence of peaks not existing in conventional signatures.

84. (Original) The chemical compositions of Claim 83, wherein said peaks not existing in conventional signatures originate from attractive forces between opposite inter-atomic polarities of a magnetic polarization of the orbits of at least some of the peripheral non-valence electrons of the atoms constituting said conventional molecule or dimer in conjunction with the polarization of the intrinsic magnetic moments of nuclei and of electrons, when not correlated into valence bonds with antiparallel spins.

85. (Original) The chemical compositions of Claim 79, wherein the average density is greater than that of the conventional molecules constituting said magnecules and any of their combination under the same conditions of volume pressure and temperature.

86. (Original) The chemical compositions of Claim 79, wherein an excess energy content is released from a thermochemical reaction of said essentially pure population of magnecules as compared to the energy released by thermochemical reaction of any conventional molecular constituent and any combinations thereof.

87. (Original) The chemical compositions of Claim 86, wherein the excess energy content is due to a storage of energy in the structure of said magnecules, said conventional molecules and said dimers constituting the magnecules.

88. (Original) The chemical compositions of Claim 79, wherein said peaks in the mass spectrometry change in time while keeping constant the average magnecular density.

89. (Original) The chemical compositions of Claim 79, wherein said essentially pure population of magnecules has an excess adhesion to other substances when compared to the adhesion of any molecule constituting said magnecules and any combinations thereof.

90. (Canceled)

91. (Original) The chemical compositions of Claim 79, wherein said essentially pure population of magnecules has an excess penetration within other substances as compared to that of any conventional molecule constituting said magnecules or that of any of combinations thereof.

92. (Canceled)

93. (Canceled)

94. (Canceled)

95. (Original) The chemical compositions of Claim 79, wherein said essentially pure population of magnecules is a combustible gas.

96. (Original) The chemical compositions of Claim 95, wherein said combustible gas is essentially constituted by hydrogen and its magnecular clusters.

97. (Original) The chemical compositions of Claim 95, wherein said combustible gas is essentially constituted by oxygen and its magnecular clusters.

98. (Original) The chemical compositions of Claim 95, wherein said combustible gas is essentially constituted by oxygen and hydrogen bonded into magnecules.

99. (Canceled)

100. (Original) The chemical compositions of Claim 95, wherein carbon and its molecular composites are removed from the combustion exhaust of said combustible gas with magneccular structure.

101. (Original) The chemical compositions of Claim 95, wherein said gas with magneccular structure is formed from a combination of one or more of conventional gasses.

102. (New) An apparatus to increase the density and energy content of a fuel via the flowing of said fuel through an electric arc wherein

said electric arc creates a substantially pure population of magneccules composed of clusters of one of a molecule, a dimer, an atom and combinations thereof of said fuel;

said magneccules being detectable via peaks in mass spectrometry that result in being unidentifiable as known conventional molecules and said magneccules having no infrared signature for a gaseous fuel or ultraviolet signature for a liquid fuel other than signatures of conventional molecules or dimers constituting said magneccules; and

said magneccules being formed by mutual attractions among opposite polarities of a magnetic polarization of orbits of at least some peripheral electrons of atomic constituents of said fuel in conjunction with a polarization of intrinsic magnetic moments of nuclei and of electrons.

103. (New) The apparatus according to claim 102, wherein said fuel is hydrogen.

104. (New) The apparatus according to claim 102, wherein said fuel is oxygen.

105. (New) The apparatus according to claim 102, wherein said fuel is a mixture of hydrogen and oxygen.

106. (New) The apparatus according to claim 102, wherein said fuel is a fossil fuel.



107. (New) The apparatus according to claim 102, wherein said fuel is a mixture of a fossil fuel and hydrogen.

108. (New) The apparatus according to claim 102, wherein said fuel is a mixture of a fossil fuel and oxygen.

109. (New) The apparatus according to claim 102, wherein said peaks characterizing said magnecules change in time.

110. (New) The apparatus according to claim 102, wherein said fuel acquires an anomalous adhesion to other substances.

111. (New) The apparatus according to claim 102, wherein said fuel acquires an anomalous penetration within other substances.